



A super-eigenvector approach to control constrained max-plus linear systems

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Résumé en anglais	The control of timed Petri nets subject to synchronization and time delay phenomena is addressed in this paper. This class of timed Petri nets can be described by using the max-plus algebra. The objective is to design a feedback controller for a max-plus linear system to ensure that the system evolution respects time constraints imposed to the state that can be expressed by a semimodule. In order to achieve this goal, an approach based on the definition of the super-eigenvector of a matrix is proposed. Under some conditions, it ensures the existence of a feedback and allows us to compute it. The contribution is illustrated by a transportation control problem taken from literature.
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